

We claim:

1. A method of diagnosing sepsis in a human subject, comprising:  
comparing concentration of at least one analyte in a test sample from said human subject to concentration of said at least one analyte in a reference range that was determined for one or more control samples obtained from one or more human subjects not suffering from sepsis, wherein the at least one analyte is selected from the group consisting of: IL-1Ra, MCP-1, MPIF-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, and ST-2;  
diagnosing sepsis in the human subject if the concentration of the at least one analyte is elevated in the test sample relative to the reference range.
2. The method of claim 1 wherein said samples comprise blood.
3. The method of claim 1 wherein said samples comprise serum.
4. The method of claim 1 wherein said samples comprise plasma.
5. The method of claim 1 wherein the at least one analyte comprises IL-1Ra.
6. The method of claim 1 wherein the at least one analyte comprises MCP-1.
7. The method of claim 1 wherein the at least one analyte comprises MPIF-1.
8. The method of claim 1 wherein the at least one analyte comprises TNF-R1.
9. The method of claim 1 wherein the at least one analyte comprises MIG.
10. The method of claim 1 wherein the at least one analyte comprises BLC.
11. The method of claim 1 wherein the at least one analyte comprises HVEM.
12. The method of claim 1 wherein the at least one analyte comprises IL-15.
13. The method of claim 1 wherein the at least one analyte comprises MCP-2.
14. The method of claim 1 wherein the at least one analyte comprises M-CSF.
15. The method of claim 1 wherein the at least one analyte comprises MIP-3b.
16. The method of claim 1 wherein the at least one analyte comprises MMP-9.
17. The method of claim 1 wherein the at least one analyte comprises PARC.
18. The method of claim 1 wherein the at least one analyte comprises ST-2.
19. The method of claim 1 wherein sepsis is diagnosed if at least two of said analytes in said test sample are elevated.

20. The method of claim 1 wherein sepsis is diagnosed if at least three of said analytes in said test sample are elevated.
21. The method of claim 1 wherein sepsis is diagnosed if at least four of said analytes in said test sample are elevated.
22. The method of claim 1 wherein sepsis is diagnosed if at least five of said analytes in said test sample are elevated.
23. The method of claim 1 wherein sepsis is diagnosed if at least six of said analytes in said test sample are elevated.
24. A method of diagnosing sepsis in a human subject, comprising:  
comparing concentration of at least two analytes in a test sample from said human subject to concentration of said at least two analytes in a reference range that was determined for one or more control samples obtained from one or more human subjects not suffering from sepsis, wherein a first analyte of said two analytes is selected from a first group and a second analyte of said two analytes is selected from a second group, wherein the first group consists of: IL-1Ra, MCP-1, MPIF-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, and ST-2, and the second group consists of IL-6, sIL-2R , CD141, and MMP-9;  
diagnosing sepsis in the human subject if the concentration of at least one analyte in the first group and at least one analyte in the second group is elevated in the test sample relative to the reference range.
25. The method of claim 24 wherein the concentration of at least three of said analytes are elevated.
26. The method of claim 24 wherein the concentration of at least four of said analytes are elevated.
27. The method of claim 24 wherein the concentration of at least five of said analytes are elevated.
28. The method of claim 24 wherein the concentration of at least six of said analytes are elevated.

29. A method of diagnosing sepsis in a human subject, comprising:

comparing concentration of at least one analyte in a test sample from said human subject to concentration of said at least one analyte in a reference range that was determined for one or more control samples obtained from one or more human subjects not suffering from sepsis, wherein the at least one analyte is selected from the group consisting of: EGF, ENA-78, EOT, Gro-beta, IL-1b, Leptin, MIF, MIP-1a, OSM, Protein C, P-Selectin, and HCC4;

diagnosing sepsis in the human subject if the concentration of the at least one analyte is depressed in the test sample relative to the reference range.

30. The method of claim 29 wherein said samples comprise blood.

31. The method of claim 29 wherein said samples comprise serum.

32. The method of claim 29 wherein said samples comprise plasma.

33. The method of claim 29 wherein the at least one analyte comprises EGF.

34. The method of claim 29 wherein the at least one analyte comprises ENA-78.

35. The method of claim 29 wherein the at least one analyte comprises EOT,

36. The method of claim 29 wherein the at least one analyte comprises Gro-beta.

37. The method of claim 29 wherein the at least one analyte comprises IL-1b.

38. The method of claim 29 wherein the at least one analyte comprises Leptin.

39. The method of claim 29 wherein the at least one analyte comprises MIF.

40. The method of claim 29 wherein the at least one analyte comprises MIP-1a.

41. The method of claim 29 wherein the at least one analyte comprises OSM.

42. The method of claim 29 wherein the at least one analyte comprises Protein C.

43. The method of claim 29 wherein the at least one analyte comprises P-Selectin.
44. The method of claim 29 wherein the at least one analyte comprises HCC4.
45. The method of claim 29 wherein sepsis is diagnosed if at least two of said analytes in said test sample are depressed.
46. The method of claim 29 wherein sepsis is diagnosed if at least three of said analytes in said test sample are depressed.
47. The method of claim 29 wherein sepsis is diagnosed if at least four of said analytes in said test sample are depressed.
48. The method of claim 29 wherein sepsis is diagnosed if at least five of said analytes in said test sample are depressed.
49. The method of claim 29 wherein sepsis is diagnosed if at least six of said analytes in said test sample are depressed.
50. A method of diagnosing sepsis in a human subject, comprising:  
comparing concentration in a test sample from said human subject of at least one analyte selected from a first group and at least one analyte selected from a second group to concentration of said selected analytes in a reference range that was determined for one or more control samples obtained from one or more human subjects not suffering from sepsis, wherein the first group consists of: IL-1Ra, MCP-1, MPIF-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, and ST-2; and the second group consists of EGF, ENA-78, EOT, Gro-beta, IL-1b, Leptin, MIF, MIP-1a, OSM, Protein C, P-Selectin, and HCC4;  
diagnosing sepsis in the human subject if the concentration at least one analyte in the first group is elevated in the test sample relative to the reference range and at least one analyte in the second group is depressed in the test sample relative to the reference range.
51. The method of claim 50 wherein said samples comprise blood.
52. The method of claim 50 wherein said samples comprise serum.
53. The method of claim 50 wherein said samples comprise plasma.

54. The method of claim 50 wherein sepsis is diagnosed if at least two analytes selected from the first group are elevated in said test sample.
55. The method of claim 50 wherein sepsis is diagnosed if at least three analytes selected from the first group are elevated in said test sample.
56. The method of claim 50 wherein sepsis is diagnosed if at least four analytes selected from the first group are elevated in said test sample.
57. The method of claim 50 wherein sepsis is diagnosed if at least five analytes selected from the first group are elevated in said test sample.
58. The method of claim 50 wherein sepsis is diagnosed if at least six analytes selected from the first group are elevated in said test sample.
59. A method of diagnosing sepsis in a human subject, comprising:  
comparing concentration of at least one analyte in a test sample from said human subject to concentration of said at least one analyte in a reference range that was determined for one or more control samples obtained from one or more human subjects not suffering from sepsis, wherein the at least one analyte is selected from the group consisting of: IL-1Ra, MCP-1, MPIF-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, ST-2, and fragments or metabolites thereof;  
diagnosing sepsis in the human subject if the concentration of the at least one analyte is elevated in the test sample relative to the reference range.
60. The method of claim 59 wherein sepsis is diagnosed if the concentrations of at least 2 of said analytes are elevated.
61. The method of claim 59 wherein sepsis is diagnosed if the concentrations of at least 3 of said analytes are elevated.
62. The method of claim 59 wherein sepsis is diagnosed if the concentrations of at least 4 of said analytes are elevated.
63. The method of claim 59 wherein sepsis is diagnosed if the concentrations of at least 5 of said analytes are elevated.
64. The method of claim 59 wherein sepsis is diagnosed if the concentrations of at least 6 of said analytes are elevated.

65. A method of diagnosing sepsis in a human subject at risk of developing sepsis, comprising:  
comparing concentration in a test sample from said human subject of at least one analyte selected from a first group and at least one analyte selected from a second group to concentration of said selected analytes in a reference range that was determined for one or more standard samples , wherein the first group consists of: IL-1Ra, MCP-1, MIP-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, and ST-2; and the second group consists of EGF, ENA-78, EOT, Gro-beta, IL-1b, Leptin, MIF, MIP-1a, OSM, Protein C, P-Selectin, and HCC4;  
diagnosing sepsis in the human subject if the concentration of at least one analyte in the first group is elevated in the test sample relative to the reference range or at least one analyte in the second group is depressed in the test sample relative to the reference range.
66. The method of claim 65 wherein the diagnosis is made on the basis of an elevated concentration.
67. The method of claim 65 wherein the diagnosis is made on the basis of a depressed concentration.
68. The method of claim 65 wherein said test sample is blood.
69. The method of claim 65 wherein said test sample is serum.
70. The method of claim 65 wherein said test sample is plasma.
71. The method of claim 65 wherein said standard sample is a sample obtained from one or more human subjects not suffering from sepsis.
72. The method of claim 65 wherein said standard sample comprises of a synthetic mixture of said analytes.
73. The method of claim 65 wherein said standard sample is a sample obtained from one or more human subjects who are critically ill but not suffering from sepsis.
74. A method of diagnosis of deterioration or risk of progression to severe sepsis in a human subject suspected of having or having sepsis, the method comprising,

determining the concentration of one or more analytes in a first sample obtained from said subject, wherein said one or more analytes is selected from a first group consisting of: IL-1Ra, MCP-1, MPIF-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, and ST-2;  
or a second group consisting of EGF, ENA-78, EOT, Gro-beta, IL-1b, Leptin, MIF, MIP-1a, OSM, Protein C, P-Selectin, and HCC4;

determining the concentration of said one or more analytes in a second sample obtained from said subject, wherein said second sample is obtained at a time later than the time of obtaining the first sample; and,

comparing the concentrations of analytes from said first and second samples, wherein an elevated concentration in the second sample relative to the first of an analyte selected from the first group or a depressed concentration in the second sample relative to the first of an analyte selected from the second group indicates deterioration or risk of progression to severe sepsis in the human subject.

75. The method of claim 88 wherein said samples are blood.
76. The method of claim 88 wherein said samples are serum.
77. The method of claim 88 wherein said samples are plasma.
78. A method of diagnosing sepsis in an acutely ill human subject at risk of developing sepsis, comprising:  
determining concentration of one or more analytes in a sample obtained from said subject wherein said one or more analytes is selected from a first group consisting of: IL-1Ra, MCP-1, MPIF-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, and ST-2; and a second group consisting of : EGF, ENA-78, EOT, Gro-beta, IL-1b, Leptin, MIF, MIP-1a, OSM, Protein C, P-Selectin, and HCC4;

diagnosing sepsis in the subject if the concentration of at least one analyte from the first group is elevated or the concentration of at least one analyte from the second group is depressed relative to the concentration of said analyte in a reference range that was determined for one or more standard samples.

79. The method of claim 78 wherein the concentration of at least one analyte from the first group is elevated.
80. The method of claim 78 wherein the concentration of at least one analyte from the second group is depressed.
81. The method of claim 78 wherein said samples are blood.
82. The method of claim 78 wherein said samples are serum.
83. The method of claim 78 wherein said samples are plasma.
84. The method of claim 78 wherein said standard sample is a sample obtained from a human subject not suffering from sepsis.
85. The method of claim 78 wherein said standard sample is a sample obtained from a human subject who is critically ill but not suffering from sepsis.
86. The method of claim 78 wherein said standard sample comprises a synthetic mixture of said analytes.
87. The method of claim 78 wherein the human subject is hospitalized.
88. A method of diagnosis of improvement in a human subject suspected of having or having sepsis, the method comprising,
  - determining the concentration of one or more analytes in a first sample obtained from said subject, wherein said one or more analytes is selected from a first group consisting of: IL-1Ra, MCP-1, MIPF-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, and ST-2;
  - or a second group consisting of EGF, ENA-78, EOT, Gro-beta, IL-1b, Leptin, MIF, MIP-1a, OSM, Protein C, P-Selectin, and HCC4;



determining the concentration of said one or more analytes in a second sample obtained from said subject, wherein said second sample is obtained at a time later than the time of obtaining the first sample, and,

comparing the concentrations of analytes from said first and second samples, wherein an depressed concentration in the second sample relative to the first of an analyte selected from the first group or an elevated concentration in the second sample relative to the first of an analyte selected from the second group indicates improvement of sepsis or the risk of sepsis in the human subject.

89. The method of claim 88 wherein said samples are blood.
90. The method of claim 88 wherein said samples are serum.
91. The method of claim 88 wherein said samples are plasma.
92. A method for diagnosis of deterioration or risk of progression to severe sepsis in a human subject suspected of having or having sepsis, comprising:

determining the concentration of one or more analytes in a sample obtained from a subject, wherein the one or more analytes is selected from a first group consisting of: IL-1Ra, MCP-1, MPIF-1, TNF-R1, MIG, BLC, HVEM, IL-15, MCP-2, M-CSF, MIP-3b, MMP-9, PARC, and ST-2 or a second group consisting of EGF, ENA-78, EOT, Gro-beta, IL-1b, Leptin, MIF, MIP-1a, OSM, Protein C, P-Selectin, and HCC4;

comparing the concentration of said one or more analytes with a reference range obtained from a one or more control samples obtained from control subjects who have sepsis that is not severe; wherein an elevated concentration in the patient sample relative to the reference range of an analyte selected from the first group or a depressed concentration in the patient sample relative to the reference range of an analyte selected from the second group

indicates deterioration or risk of progression to severe sepsis in the test patient.

- 93. The method of claim 92 wherein said samples are blood.
- 94. The method of claim 92 wherein said samples are serum.
- 95. The method of claim 92 wherein said samples are plasma.